REMARKS

The rejection under 35 USC §102(b)

The examiner rejected claims 18 through 21 under 35 USC §102(b) for being directed to subject matter assertedly anticipated by the disclosure of Ichikawa, Proc, Natl. Acad. Sci (USA) 97:9659-9664 (2000) (hereinafter "Ichikawa"). Specifically, the examiner referred to disclosure in Ichikawa of a commercially available set of random decamers which the examiner asserted comprises all possible 10mers. The examiner further asserted that the disclosed set of 10mers comprises 4^{10} different sequences and will necessarily have oligonucleotides found within the instantly claimed set. The applicants respectfully traverse.

The examiner's position in based on the assumption that the set "random" 10mers disclosed in Ichikawa has all possible 10mers, i.e., 4^{10} 10mer sequences. However, in a truly random set of 10 base oligonucleotides, the possibility exists, however small, that each and every sequence in the population is exactly the same. Regardless of the low probability of this occurrence, the fact remain in this situation that no two sequences in this "random" population will have complementary sequences that will hybridize and leave overhanging ends that are different; because the sequences are identical and just happen to hybridize, the overhanging ends will necessarily be identical, thereby falling outside the scope of the claims.

Given that no sequences are disclosed for any of the random 10mers disclosed in Ichikawa, there is no evidence as to the structure of any oligonucleotide found in the random set and the examiner's position is presumptively based on inherent anticipation. However, "inherent anticipation requires proof that the claimed element is an inherent property or function of the prior art: Inherency . . . may not be established by probabilities or possibilities." *See Purdue Pharma v. Boehringer Ingleheim* 98 F.Supp. 2d 362, 379 (SDNY, 2000), citing *Mehl/Biophile Int'l Corp.*, 192 F.3d at 1365). The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Id.* Thus, the burden is on the examiner to prove that the cited set of random 10mers does in fact include a pair of oligonucleotides that will hybridize and fall within the scope of the claims. Without such proof, the rejection cannot be sustained and must be withdrawn.

Further, the subject matter of claim 1 is directed to two sets of oligonucleotides which are not "mixed," i.e., all oligonucleotide from one set have the same second end sequence, which is complementary to the second end sequence of the oligonucleotides in second set. Thus, all oligonucleotides in each of the two sets have the same second end sequence. The amendment to claim 18 herein thus makes explicit what was intended in the claim as filed, and thereby precludes disclosure of a ransom set of oligonucleotides from anticipating the claimed subject matter. While it is noted that in a truly random set of oligonucleotides, it may be possible that two sets of oligonucleotides as claimed *may* be generated, as discussed above, such a mere possibility is insufficient to support any assertion of inherent anticipation by such random sets.

Inasmuch as the broadest claim is anticipated by the cited reference, it is axiomatic that subject matter of claims depending therefrom, incorporating all limitation of the broad claim, cannot be anticipated by the same reference. Accordingly, without the necessary proof discussed above, the rejection of claims 19 through 21 must also be withdrawn.

CONCLUSION

In view of the remarks made herein, the applicants submit that all claims under consideration are now in condition for allowance and respectfully request notification of the same.

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Respectfully submitted,

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